

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2010-_____

FOR
SAGE CANYON, LLC
SOMERSTON WINERY
NAPA COUNTY

This Monitoring and Reporting Program (MRP) incorporates requirements for monitoring of the wine production, wastewater effluent, land application areas, water softener brine and solids. MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All wastewater samples should be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Winery wastewater flow monitoring shall be conducted continuously using a flow meter and shall be reported in cumulative gallons per day.

Field test instruments (such as pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are field calibrated prior to each use;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

WINE PRODUCTION

The following wine production data shall be reported in the annual report:

<u>Constituents</u>	<u>Units</u>
Wine Production	Gallons per Year
Wine Production	Cases per Year
Grapes Crushed	Tons per Year

EFFLUENT MONITORING

Process wastewater samples shall be collected prior to discharge to the land application areas. Effluent monitoring from the process wastewater system shall include at least the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	gallons	Continuous	Daily ¹	Monthly
Total Flow ¹	gallons	Continuous	Totalizer ¹	Monthly
pH	Std. Units	Grab	Monthly	Monthly

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Electrical Conductivity	umhos/cm	Grab	Weekly	Monthly
Biochemical Oxygen Demand	mg/L	Grab	Monthly	Monthly
Nitrate as N	mg/L	Grab	Monthly	Monthly
Total Nitrogen as N	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids (TDS)	mg/L	Grab	Monthly	Monthly
Fixed Dissolved Solids (FDS)	mg/L	Grab	Monthly	Monthly
Sodium	mg/L	Grab	Monthly	Monthly
Chloride	mg/L	Grab	Monthly	Monthly
Standard Minerals ²	mg/L	Grab	Quarterly	Quarterly

¹ Continuous monitoring requires daily meter reading or automated data collection using a meter equipped with a totalizer. Total flow means the cumulative total for the calendar year.

² Standard minerals include the following: boron, calcium, iron, magnesium, manganese, potassium, sulfate, total alkalinity (including alkalinity series), and hardness.

LAND APPLICATION AREA MONITORING

The Discharger shall monitor process wastewater discharged from the storage tank for irrigation to the land application area. Monitoring shall be conducted **daily during irrigation with wastewater** and the results shall be included in the monthly monitoring report. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. Loading rates for the land application areas shall be calculated. Monitoring of the land application areas shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Wastewater Flow ²	Gallons	Continuous ¹	Daily	Monthly
Supplemental Irrigation Flow	Gallons	Continuous ¹	Daily	Monthly
Local Rainfall	Inches	Measurement	Daily	Monthly
Acreage Applied ³	Acres	Calculated	Daily	Monthly
Application Rate	gal/acre·day	Calculated	Daily	Monthly
BOD Loading Rate	lbs/acre·day	Calculated	Daily	Monthly
Total Nitrogen Loading Rate ⁴	lbs/acre·month ⁵	Calculated	Monthly	Monthly
Total Nitrogen Concentration ⁴	Mg/L ⁵	Calculated	Monthly	Monthly/Annual
TDS Loading Rate	lbs/acre·month ⁵	Calculated	Monthly	Monthly
FDS Loading Rate	lbs/acre·month ⁵	Calculated	Monthly	Monthly
Crop Removal Mass	pounds	Measured	Monthly	Monthly

¹ Samples only need be collected during the irrigation season. If irrigation does not occur during a reporting period, the monitoring report shall so state.

² Continuous monitoring requires daily meter reading or automated data collection and shall define the volume of wastewater discharged to the land application areas from the wastewater storage tank.

³ Land Application Area(s) in use shall be identified by name and the acreage provided. If a portion of an area is used, then the acreage shall be estimated.

⁴ Total nitrogen applied from all sources, including fertilizers and supplemental irrigation water if used.

⁵ Report monthly total and cumulative annual to date.

At least **once per week** when wastewater is being applied to the land application areas, the entire application area shall be inspected to identify any equipment malfunction or other circumstance that might allow irrigation runoff to leave the area and/or create ponding conditions that violate the Waste Discharge Requirements. A log of these inspections shall be kept at the facility and be submitted with the monthly monitoring reports. If wastewater was not applied to the land application area, then the monthly monitoring reports shall so state.

WATER SOFTENER BRINE MONITORING

If generated, the Discharger shall record and report monthly the quantity of liquid waste (water softening ion exchange regeneration brine, wine treatment ion exchange regeneration brine, etc.) generated, the day the liquid waste was hauled offsite, the identified hauler, and description of the disposal location for the material. If not generated, a statement stating so.

SOLIDS MONITORING

The Discharger shall record and report monthly the quantity, drying location, storage location, disposal location, and method of disposal of solids disposed of during the processing season, as well as during the off-season, if applicable. If solid waste is shipped offsite during the reporting period, then an estimated amount and location of disposal shall be reported in the monthly report and the hauler identified.

The storage of any pomace shall be described. The description shall include the material stored, approximate amount stored, location of storage, and measures implemented to prevent leachate generation or control and dispose of any leachate that is generated.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent monitoring), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all groundwater monitoring reports shall be prepared under the direct supervision of a registered professional engineer or geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board by the **1st day of the second month** following the end of the reporting period (i.e. the January monthly report is due by 1 March). The monthly reports shall include the following:

1. Results of effluent, land application area, water softener brine and solids monitoring;

2. A comparison of monitoring data to the discharge specifications and effluent limitations, disclosure of any violations of the WDRs, and an explanation of any violation of those requirements. Data shall be presented in tabular format. The annual average concentration for FDS in treated wastewater shall be calculated. The calculations shall include the following:
 - i. On a month to month basis, beginning each year in January, the simple arithmetic average value shall be calculated. (The sum of all the concentration data shall be divided by the number of months data was collected). If for any reason, more than one data point is available for any month, that data shall be averaged before use in the running average calculation. No data shall be excluded from the calculation without a written explanation from the analytical laboratory.
3. For the months of March, June, September, and December, the monthly reports shall include the results of the quarterly monitoring of effluent (standard minerals analysis).
4. If requested by staff, copies of laboratory analytical report(s);
5. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program;
6. The cumulative volume of wastewater generated during the year to date;
7. The total pounds of TDS and FDS (year to date) that have been applied to the land application areas, as calculated from the sum of monthly loadings; and
8. The total pounds of nitrogen (year to date, from all sources including fertilizer) applied to the land application area as calculated from the sum of monthly loadings.
9. A summary of the quantity of solid waste (stems, pomace, crops removed, etc.) generated and disposed of off-site.

C. Annual Report

Annual Report shall be prepared as the December monthly monitoring report. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. An antidegradation evaluation that confirms the Discharger's assertions of no degradation of the environment. The annual report shall contain at a minimum the following: identify winery constituents of concern and evaluate the effectiveness of the treatment process and BPTC measures currently in place to reduce the constituents of concern; include actual loading rates for TDS and nitrogen applied to the land application areas confirming compliance with the Order; discuss cropping activities (to include but not limited to nutrient uptake capacity, consumptive use of water and irrigation requirements, evapotranspiration rates, and appropriate protocol for the application of any supplemental fertilizer); include a nitrogen balance to demonstrate that the amount of land application areas is protective of groundwater quality, ensures adequate nutrient loading, and prevents nitrogen concentrations from exceeding background groundwater quality; describe irrigation protocols and demonstrate control of

the land applied wastewater such that it does not pool or course off the Discharger's property; and include the monthly application concentration values of the blended wastewater and supplemental irrigation water prior to irrigation. This report shall verify, in the absence of a groundwater monitoring network, the Discharger's initial antidegradation assertions that irrigation with treated wastewater to the land application areas is protective of groundwater quality.

2. The contents of a regular December monthly monitoring report.
3. The contents of the regular quarterly monitoring of effluent (standard minerals analysis) for the last quarter of the year.
4. Annual wine production quantities for the year.
5. Tabular and graphical summaries of all data collected during the year.
6. Tabular and graphical summaries of historical monthly total loading rates for wastewater generation, process water used for irrigation (hydraulic loading in gallons/acre and inches), total nitrogen, TDS, and FDS.
7. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control and groundwater protection beneath the land application areas, including consideration of application management practices (e.g.: waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices).
8. A summary of the vegetative material (crops) removed from the land application areas. The summary shall include harvest dates, crop type, disposal area, and estimated ash content of the harvest.
9. A summary of the quantity of solid waste (lees, stems, pomace, etc.) generated and disposed of off-site.
10. Updated background groundwater values based on data collected for the *Site Specific Conditions Report*. A comparison of the background groundwater concentration and annual average effluent FDS concentrations as described in the Monthly Monitoring Reports Item A.2.i.
11. A description of source control methods that have been implemented in the calendar year.
12. Estimated flows for the next calendar year.
13. A discussion of compliance and corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.
14. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring

system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(Date)